What is claimed is:

1. An antenna device wherein a first radiation plate and a second radiation plate of which diameter or one side is about 1/2 wavelength in electrical length are disposed on a ground plate at an arbitrary interval, a first power feed port and a second power feed port provided on the first radiation plate are disposed so that the straight lines linking each power feed port position and the middle point of the first radiation plate may be orthogonal to each other, a third power feed port and a fourth power feed port provided on the second radiation plate are disposed so that the straight lines linking each power feed port position and the middle point of the second radiation plate may be orthogonal to each other, and the two orthogonal straight lines of the first radiation plate are defined to have an angle of 45 degrees to the two orthogonal straight lines of the second radiation plate.

2. The antenna device of claim 1, wherein the first and second radiation plates are formed as nearly circular radiation plates of about 1/2 wavelength in electrical length.

3. The antenna device of claim 1, wherein the first and second radiation plates are formed as nearly square radiation plates of which one side or diagonal length is about 1/2 wavelength in electrical length.

4. The antenna device of claim 1, wherein the ground plate is folded so that an arbitrary straight line between the

adjacent first and second radiation plates forms like a hill top.

5. The antenna device of claim 1, wherein the interval from the ground plate to the first and second radiation plates in a region of about 1/8 wavelength in electrical length from the end portions of the first and second radiation plates is narrower than the interval from the ground plate to the first and second radiation plates in other region on the radiation plates.

6. The antenna device of claim 1, wherein the value of dividing the relative permeability by the dielectric constant of a base element between the ground plate and the first and second radiation plate in a region of about 1/8 wavelength in electrical length from the end portions of the first and second radiation plates is smaller than the value of dividing the relative permeability by the dielectric constant of a base element between the ground plate and the radiation plates in other region on the first and second radiation plates.

7. The antenna device of claim 1, wherein four square slits line symmetrical to each straight line linking each power feed port and the middle point of the first and second radiation plates are provided in the radiation plates, and each orthogonal straight line orthogonal to each straight line and two sides of four square slits contact with each other at positions of about 1/8 wavelength in electrical length from the end portions

of the first and second radiation plates on each straight line.

8. The antenna device of claim 1, wherein the first power feed port and second power feed port are used in a first system, and the third power feed port and fourth power feed power are used in a second system.

9. The antenna device of claim 1, wherein the first power feed port and third power feed port are used in a first system, and the second power feed port and fourth power feed power are used in a second system.

10. The antenna device of claim 1, wherein each power feed port is connected to the first and second radiation plates by way of gaps.

11. The antenna device of claim 1, wherein three or more radiation plates of which diameter or one side is about 1/2 wavelength in electrical length are disposed on the ground plate at a specific interval, two power feed ports provided in each radiation plate are disposed so as to cross each other orthogonally between the position of each power feed port and the straight line linking the middle point of the radiation plates, and the power feed port positions of adjacent radiation plates and the straight line linking the middle point of the radiation plates may have an angle of 45 degrees from each other.

12. An antenna device wherein a first radiation plate and a second radiation plate of which diameter or one side is about 1/2 wavelength in electrical length are disposed on a ground

plate at an arbitrary interval, a first power feed port and a second power feed port provided on the first radiation plate are disposed so that the straight lines linking each power feed port position and the middle point of the first radiation plate may be orthogonal to each other, a third power feed port and a fourth power feed port are disposed also on the second radiation plate in a similar positional relation, and the straight line linking the middle point of the first power feed port and second power feed port and the middle point of the first radiation plate or the straight line orthogonal to this straight line at the middle point of the radiation plate and the straight line linking the middle point of the third power feed port and fourth power feed port and the middle point of the second radiation plate or the straight line orthogonal to this straight line at the middle point of the radiation plate are present on an identical straight line.

13. The antenna device of claim 12, wherein a plurality of radiation plates of which diameter or one side is about 1/2 wavelength in electrical length are disposed on the ground plate at an arbitrary interval, two power feed ports provided in each radiation plate are disposed so that the power feed ports may cross each other orthogonally with the straight line linking with the middle point of the radiation plate, and each straight line linking the middle point of two power feed ports of each radiation plate and the middle point of the radiation plate are

present on an identical straight line.

14. The antenna device of claim 12, wherein the radiation plates are formed as nearly circular radiation plates of about 1/2 wavelength in electrical length.

15. The antenna device of claim 12, wherein the radiation plates are formed as nearly square radiation plates of which one side or diagonal line is about 1/2 wavelength in electrical length.

16. The antenna device of claim 12, wherein the ground plate is folded so that an arbitrary straight line between the adjacent radiation plates forms like a hill top.

17. The antenna device of claim 12, wherein the interval from the ground plate to the radiation plates in a region of about 1/8 wavelength in electrical length from the end portions of the radiation plates is narrower than the interval from the ground plate to the radiation plates in other region on the radiation plates.

18. The antenna device of claim 12, wherein the value of dividing the relative permeability by the dielectric constant of a base element between the ground plate and the radiation plate in a region of about 1/8 wavelength in electrical length from the end portions of the radiation plates is smaller than the value of dividing the relative permeability by the dielectric constant of a base element between the ground plate and the radiation plates in other region on the radiation

plates.

19. The antenna device of claim 12, wherein four square slits line symmetrical to each straight line linking each power feed port and the middle point of the radiation plates are provided in the radiation plates, and each orthogonal straight line orthogonal to each straight line and two sides of four square slits contact with each other at positions of about 1/8 wavelength in electrical length from the end portions of the radiation plates on each straight line.

20. The antenna device of claim 12, wherein the first power feed port and second power feed port are used in a first system, and the third power feed port and fourth power feed power are used in a second system.

21. The antenna device of claim 12, wherein the first power feed port and third power feed port are used in a first system, and the second power feed port and fourth power feed power are used in a second system.

22. The antenna device of claim 12, wherein each power feed port is connected to the radiation plates by way of gaps.

23. An antenna device wherein a first radiation plate and a second radiation plate of which diameter or one side is about 1/2 wavelength in electrical length are disposed on a ground plate at an arbitrary interval, a first power feed port and a second power feed port are provided in the peripheral area of the first radiation plate, a first straight line linking the

first power feed port provided on the first radiation plate and the middle point of the first radiation plate is orthogonal to a second straight line linking the second power feed port and the middle point of the first radiation plate, a third straight line linking a third power feed port provided on the second radiation plate and the middle point of the second radiation plate is orthogonal to a fourth straight line linking a fourth power feed port provided on the second radiation plate and the middle point of the second radiation plate, the electrical length of the first straight line and the electrical length of the third straight line and the electrical length of the second straight line and the electrical length of the fourth straight line are the identical length, the electrical length of the first straight line and the electrical length of the second straight line are different lengths, and the first straight line and the third straight line or the second straight line and the fourth straight line are present on different lines.

24. The antenna device of claim 23, wherein three or more radiation plates are provided.

25. The antenna device of claim 23, wherein the radiation plates are formed in elliptical shape of which length of major axis and minor axis is about 1/2 wavelength in electrical length.

26. The antenna device of claim 23, wherein the radiation plates are formed in rectangular shape of which length of major

axis and minor axis is about 1/2 wavelength in electrical length.

27. The antenna device of claim 23, wherein the longer sides or major axes of the adjacent radiation plates cross each other orthogonally.

28. The antenna device of claim 23, wherein the radiation plates are formed in a shape in which the gap between the ground plate and the radiation plates is wider at a position of about 1/8 wavelength in electrical length from the end portion of the radiation plates on a straight line linking each power feed port and the middle point of the radiation plates.

29. The antenna device of claim 23, wherein the value of dividing the relative permeability by the dielectric constant of a base element between the ground plate and the radiation plate is designed to be larger at a position of about 1/8 wavelength in electrical length from the end portion of the radiation plate on the straight line linking the power feed port and the middle point of the radiation plate.

30. The antenna device of claim 23, wherein four square slits line symmetrical to a straight line A linking the power feed port and the middle point of the radiation plate are provided in the radiation plates, and a straight line B orthogonal to the straight line A contacts with two sides of each slit at a point of about 1/8 wavelength in electrical length from the end portion of the radiation plate on the straight line

A.

31. The antenna device of claim 23, wherein the ground plate is folded so that an arbitrary straight line between the adjacent radiation plates forms like a hill top.

32. The antenna device of claim 23, wherein the first power feed port and third power feed port are connected to a high frequency circuit in a first system, and the second power feed port and fourth power feed power are connected to a high frequency circuit in a second system.

33. The antenna device of claim 23, wherein the first power feed port and third power feed port are connected to a reception circuit, and the second power feed port and fourth power feed power are connected to a transmission circuit.

34. The antenna device of claim 23, wherein each power feed port is connected to the radiation plates by way of gaps.